

### **REMARKS/ARGUMENT**

Claims 3-7, 14 and 16-19 are allowed.

Claims 10-12 and 20 stand objected to as being dependent upon a base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. By this amendment, Claims 10 and 20 have been rewritten to include the limitations of base Claims 1 and 15, respectively. Accordingly, Claims 4-7 (which depend directly or indirectly on Claim 1) similarly stand allowable.

Claims 1, 2, 8, 9, 13, 15 and 21-26 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Marcoccia et al. (USP 6,169,761) in view of Kostic et al. (USP 6,549,784). Applicants respectfully traverse this rejection in light of the amendments made to independent Claims 1, 15 and 23, as set forth below.

In proceedings before the Patent and Trademark Office, "the Examiner bears the burden of establishing a prima facie case of obviousness based upon the prior art". In re Fritch, 23 USPQ2d 1780, 1783 (Fed. Cir. 1992) (citing In re Piasecki, 745 F.2d 1468, 1471-72, 223 USPQ 785, 787-88 (Fed. Cir. 1984). "The Examiner can satisfy this burden **only by showing some objective teaching in the prior art or that knowledge generally available to one of ordinary skill in the art would lead that individual to combine the relevant teachings of the references**", In re Fritch, 23 USPQ2d 1780, 1783 (Fed. Cir. 1992)(citing In re Fine, 837 F.2d 1071, 1074, 5 USPQ2d 1596, 1598 (Fed. Cir. 1988)(citing In re Lahu, 747 F.2d 703, 705, 223 USPQ 1257, 1258 (Fed. Cir. 1988)).

Although couched in terms of combining teachings found in the prior art, the same inquiry must be carried out in the context of a purported obvious "modification" of the prior art. **The mere fact that the prior art may be modified in the manner suggested by the**

**Examiner does not make the modification obvious unless the prior art suggested the desirability of the modification.** In re Gordon, 733 F.2d at 902, 221 USPQ at 1127. Moreover, **it is impermissible to use the claimed invention as an instruction manual or "template" to piece together the teachings of the prior art so that the claimed invention is rendered obvious.** In re Gorman, 933 F.2d 982, 987, 18 USPQ2d 1885, 1888 (Fed.Cir.1991). See also Interconnect Planning Corp. v. Feil, 774 F.2d 1132, 1138, 227 USPQ 543, 547 (Fed.Cir.1985).

Furthermore, "all words in a claim must be considered in judging the patentability of that claim against the prior art." In re Wilson, 424 F.2d 1382, 1385, 165 USPQ 494, 496 (CCPA 1970).

Independent Claim 1, as amended, requires and positively recites, a method of controlling frequency hopping wireless communication between first and second frequency hopping wireless communication devices, comprising: "the first device obtaining quality measurements respectively associated with frequencies that have been previously used by the second device to transmit information to the first device via a wireless communication link", "the first device selecting, based on the quality measurements, one of the frequencies for transmission of a selected upcoming communication from the first device to the second device", "the first device transmitting to the second device via the wireless communication link information indicative of the frequency that has been selected for transmission of the selected communication" and **"the second device transmitting information to the first device if the second device received the transmission from the first device indicating the frequency selected for transmission of the communication"**.

Independent Claim 15, as amended, requires and positively recites, a frequency hopping wireless communication apparatus, comprising: "a frequency selector having an input for receiving quality measurements associated with frequencies that have been

previously used to receive, via a wireless communication link, information transmitted by a further frequency hopping wireless communication apparatus, said frequency selector operable for selecting, based on said quality measurements, one of said frequencies for transmission of a selected upcoming communication to the further apparatus” and “a wireless communication interface coupled to said frequency selector for transmitting to the further apparatus via the wireless communication link information indicative of the frequency that has been selected for transmission of the selected communication **and for receiving information transmitted to said wireless communication apparatus via the selected frequency, if the further apparatus received the transmission from the wireless communication apparatus indicating the frequency selected for transmission of the communication, and a frequency selected by the further apparatus if the further apparatus did not receive the transmission from the wireless communication apparatus indicating the frequency selected for transmission of the communication**”.

Independent Claim 23, as amended, requires and positively recites, a frequency hopping wireless communication apparatus, comprising: “a wireless communication interface for receiving via a wireless communication link from a further frequency hopping wireless communication apparatus information indicative of a frequency that has been selected for transmission of a selected communication from the further apparatus to said apparatus, said frequency having been selected by the further apparatus from a plurality of frequencies based on quality measurements respectively associated with said frequencies, said frequencies having been previously used by said apparatus to transmit information to the further apparatus via the wireless communication link” and “an indicator coupled to said wireless communication interface and responsive to said information for indicating to the wireless communication interface that the selected frequency is to be used for receiving the selected communication via the wireless communication link **if the wireless communication interface received the selected frequency from the further apparatus, and a frequency selected by the wireless communication apparatus if the wireless**

**communication apparatus did not receive the transmission from the further apparatus”.**

In contrast, the Marcoccia reference discloses frequency hopping systems wherein the transmitter and receiver test the current channel frequency for 256 QAM transmission instead of FSK transmission. Accordingly, if the current channel is good the transmitter and receiver signal to each other to switch to 256 QAM transmission and start transmitting with that modulation. So in Marcoccia the master and slave see if the current frequency is good enough for the 256 QAM transmission.

The teaching in Marcoccia, however, does not teach or suggest what is taught by the present invention. The present invention discloses a hopping sequence and one of the devices tests to see which frequency is best for transmission **in the next hopping time based upon a number of frequency measurements**. Applicants respectfully traverse the Examiner’s determination that Marcoccia discloses Applicants frequency selection technique.

While the newly cited Kostic reference does discuss selecting a bunch of frequencies for frequency hopping system, it fails to overcome the previously identified deficiencies of the Marcoccia reference. Accordingly, the Marcoccia and Kostic references, alone or in combination, fail to teach or suggest, **“the second device transmitting information to the first device, using the selected frequency, if the second device received the transmission from the first device indicating the frequency selected for transmission of the communication, otherwise the second device transmits information to the first device using a frequency selected by the second device”**, as required by Claim 1, or “a wireless communication interface coupled to said frequency selector for transmitting to the further apparatus via the wireless communication link information indicative of the frequency that has been selected for transmission of the selected communication **and for receiving**

**information transmitted to said wireless communication apparatus via the selected frequency, if the further apparatus received the transmission from the wireless communication apparatus indicating the frequency selected for transmission of the communication, and a frequency selected by the further apparatus if the further apparatus did not receive the transmission from the wireless communication apparatus indicating the frequency selected for transmission of the communication”,** as required by Claim 15, or **“an indicator coupled to said wireless communication interface and responsive to said information for indicating to the wireless communication interface that the selected frequency is to be used for receiving the selected communication via the wireless communication link if the wireless communication interface received the selected frequency from the further apparatus, and a frequency selected by the wireless communication apparatus if the wireless communication apparatus did not receive the transmission from the further apparatus”,** as required by Claim 23.

Claims 2, 8 and 13 stand allowable as depending from allowable claims and including further limitations not taught or suggested by the references of record.

Claim 2 further defines the method of Claim 1, by including the first device **obtaining a further plurality of quality measurements respectively associated with a further plurality of frequencies that have been used previously by the second device to transmit information to the first device via the wireless communication link,** the first device selecting, based on the further plurality of quality measurements, one of said further plurality of frequencies for transmission of a further upcoming communication from the first device to the second device, and the first device using the frequency selected in the first-mentioned selecting step to transmit the selected communication to the second device via the wireless communication link and including within the selected communication information indicative of the frequency that has been selected for transmission of the further communication. There is no teaching or suggestion in Marcoccia and/or Kostic that, in

addition to obtaining a plurality of quality measurements associated with frequencies that have been previously used by the second device to transmit information to the first device, it teaches **obtaining a further plurality of quality measurements respectively associated with a further plurality of frequencies that have been used previously by the second device to transmit information to the first device via the wireless communication link**, as further required by Claim 2. The 35 U.S.C. 102(e) rejection of Claim 2 is overcome.

Claim 8 further defines the method of Claim 1, wherein the selected frequency is a frequency other than a normal frequency normally specified for the selected communication by a frequency hopping pattern associated with the first device. Claim 8 stands allowable for the same reasons given in support in allowance of Claim 1. Moreover, the Marcoccia and/or Kostic references fail to teach or suggest this additional limitation in combination with the other requirements of Claim 1.

Claim 9 further defines the method of Claim 1, wherein the first device and the second device are, respectively, Bluetooth slave and master devices. Claim 9 stands allowable for the same reasons given in support in allowance of Claim 1. Moreover, the Marcoccia and/or Kostic references fail to teach or suggest this additional limitation in combination with the other requirements of Claim 1. Further, regarding the Examiner's determination that Bluetooth is notoriously known in the communication area and the Examiner took official notice that it would have been obvious to one of ordinary skill in the art to apply the system of Marcoccia Bluetooth, Applicants respectfully reply that the Examiner's reliance on Bluetooth does nothing to address the deficiencies of the Marcoccia and/or Kostic references.

Claim 13 further defines the method of Claim 1, including the first device transmitting the selected communication on the selected frequency, and the second device receiving the selected communication on the selected frequency. Claim 8 stands

allowable for the same reasons given in support in allowance of Claim 1. Moreover, the Marcoccia and/or Kostic reference fails to teach or suggest this additional limitation in combination with the other requirements of Claim 1.

Claim 21 further defines the apparatus of Claim 15, provided as a Bluetooth slave device. Claim 21 stands allowable for the same reasons given in support in allowance of Claim 15. Moreover, the Marcoccia and/or Kostic references fail to teach or suggest this additional limitation in combination with the other requirements of Claim 15. Further, regarding the Examiner's determination that Bluetooth is notoriously known in the communication area and the Examiner took official notice that it would have been obvious to one of ordinary skill in the art to apply the system of Marcoccia Bluetooth, Applicants respectfully reply that the Examiner's reliance on Bluetooth does nothing to address the deficiencies of the Marcoccia and/or Kostic references.

Claim 22 further defines the apparatus of Claim 15, provided in a mobile phone unit of a cordless phone system. Claim 22 stands allowable for the same reasons given in support in allowance of Claim 15. Moreover, the Marcoccia and/or Kostic references fail to teach or suggest this additional limitation in combination with the other requirements of Claim 15. The Examiners rejection of Claim 22 is that cordless devices are is notoriously known in the communication area and the Examiner took official notice that it would have been obvious to one of ordinary skill in the art to apply the system of Marcoccia to cordless phones. Applicants respectfully reply that the Examiner's reliance on this teaching does nothing to address the deficiencies of the Marcoccia and/or Kostic references as identified in Applicants' arguments in support of the allowance of Claims 15.

Claim 24 further defines the apparatus of Claim 23, by including a determiner for determining that a first frequency of a frequency hopping pattern associated with

transmissions by said apparatus is better than a second frequency of the frequency hopping pattern for transmission of a further selected communication to the further apparatus via the wireless communication link, wherein the second frequency is specified by the frequency hopping pattern for the further selected communication and the first frequency is specified by the frequency hopping pattern for a communication to the further apparatus that most closely precedes the further selected communication, said wireless communication interface coupled to said determiner and responsive to a determination that the first frequency is better than the second frequency for using said most closely preceding communication and the first frequency to inform the further apparatus via the wireless communication link that the frequency hopping pattern will be deviated from in order to use the first frequency for transmission of the further selected communication instead of the second frequency.

Claim 25 further defines the apparatus of Claim 23, provided as a Bluetooth master device. Claim 25 stands allowable for the same reasons given in support in allowance of Claim 23. Moreover, the Marcoccia and/or Kostic references fail to teach or suggest this additional limitation in combination with the other requirements of Claim 23. Further, regarding the Examiner's determination that Bluetooth is notoriously known in the communication area and the Examiner took official notice that it would have been obvious to one of ordinary skill in the art to apply the system of Marcoccia Bluetooth, Applicants respectfully reply that the Examiner's reliance on Bluetooth does nothing to address the deficiencies of the Marcoccia and/or Kostic references.

Claim 26 further defines the apparatus of Claim 23, provided in a base unit of a cordless phone system. Claim 26 stands allowable for the same reasons given in support in allowance of Claim 23. Moreover, the Marcoccia and/or Kostic references fail to teach or suggest this additional limitation in combination with the other requirements of Claim 23. The Examiner's rejection of Claims 26 is that cordless devices are notoriously known in the communication area and the Examiner took official notice that it would have been obvious

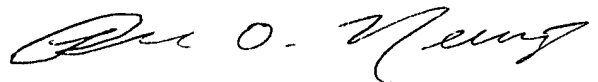


to one of ordinary skill in the art to apply the system of Marcoccia to cordless phones. Applicants respectfully reply that the Examiner's reliance on this teaching does nothing to address the deficiencies of the Marcoccia and/or Kostic references as identified in Applicants' arguments in support of the allowance of Claims 23.

New Claims 27-35 stand allowable as depending from allowable claims and including further limitations not taught or suggested by the references of record.

Claims 3-7, 14 and 16-19 stand allowed. Objected to Claims 10-12 and 20 have been amended to be allowable. Rejected Claims 1, 2, 8, 9, 13, 15 and 21-16, as amended, are allowable for the reasons set forth in this amendment. New Claims 27-35 are allowable as depending from allowable claims and including further limitations not taught or suggested by the references of record. Applicants respectfully request allowance of the application as the earliest possible date.

Respectfully submitted,



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